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AUTHOR Brown, James I.
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ABSTRACT

To help students develop techniques which lead to maximum reading efficiency, it is first necessary to help them develop a positive self-image. Growing evidence is focusing attention on self-image as the crucial determiner of progress. Poor progess in reading at the elementary level leads to poor self-image, which in turn hinders the student in work at the secondary and college levels. Studies of students in college-level reading classes show that students with a high self-image read significantly faster than students with a below-average self-image and that teaching students techniques of reading efficiency helps them to develop a positive self-image. Along with helping students improve their self-image, teachers must help them see the role played by each technique for reading efficiency and must help them understand the interrelationships of the techniques. Through Active Self Discoveries, students explore their reading speed and rate of comprehension while engaged in such techniques as prereading, skimming, surveying, and study-type reading. Vocabulary development centered on context and derivation is also an important part of a course in reading efficiency. Finally, Visual Expeditors, including the tachistoscope, TV units, and slides, help students develop perceptual skills. (GW)

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James I. Brown
University of Minnesota
St. Paul 1, Minnesota

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TECHNIQUES OF EFFICIENT READING

(To be given at the meeting, Developing More Efficient Readers, at the Sixth World Congress on Reading, Wednesday, August 18, 1430-1545)

Helping students develop those techniques leading to maximum reading efficiency is, in a sense, somewhat like constructing a house. Each technique must be fitted carefully into the total reading process to provide maximum overall reading strength. Similarly, with a house, each door and window must be positioned with the same kind of careful attention or the final results will be disasterous. Doors and windows are no more interchangeable than are different techniques of efficient reading. Each has a specific function to serve. Furthermore, that very word function

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reminds us of what is indeed the ideal basic unifying principle around which to organize the teaching of reading techniques. The concept of function provides a meaningful frame of reference which helps students see much more clearly the role each technique plays and understand much more completely the important interrelationships. For when each technique is fitted into proper place, all the other techniques will assume an enhanced usefulness.

However, to build any superstructure, even with the best plan without even more attention to foundation is to invite failure or, at best, minimal success. Growing evidence from the field of psychocybernetics is focusing attention on self-image as the crucial determiner of progress-in short as a necessary foundation upon which to build. More than anything else observed, a student's self-image would seem to facilitate or hinder learning and the development of desired reading techniques. The expression and re-expression of this idea runs through a broad range of experience in a way that suggests its basic nature -- its psychological importance.

Its key role may be observed in the following examples. Take the case of Johnnie. In the first grade, his initial difficulties with reading got him into the low reading group. In no time at all his self-image began to drop. Those in the other group read better and had more teacher approval. They, in turn, looked on him and his group as inferior--as dummies.

Multiply that first year's experience by four or five more and you can see the probably harmful effect on an individual's self-image. It is well expressed by the words, spoken or unspoken, "I'm a failure." To compensate for that devastating self-image, some children turn to juvenile delinquency as if to say, "If I can't excel in school, I can at least attract attention out of school by stealing, fighting, or breaking windows." How do you build on such a poor foundation?

Some of the early research into this relationship has, unfortunately, become over-shadowed by other concerns. In one group of a hundred reading disability cases, only eight had made a constructive compensatory reaction. Others showed nervous tensions, defense reactions such as loud talk, sullen behavior, retreat reactions, truancy, counter-attack, thefts, destructiveness, vandalism, cruelty, day-dreaming or indifference. Since these unfavorable symptoms tended to clear up when the children were given needed help to improve as readers, it appeared that they were more the result than the cause of reading disability.

Other evidence on this matter indicates that from the 29 per cent of the elementary school children who were reading disability cases came 84.4 to 92.8 per cent of the delinquent group. From this evidence, school failure would appear to be more highly correlated with the incidence of delinquency than is any other condition, including poverty, broken homes, absence of religious association, physical defect, mental defectiveness, psychopathic condition or truancy. Since school failure.

is chiefly caused by reading failure, success or failure with reading plays a dominant role in establishing self-image.

Turning from grade school to high school, take the case of Don, 17-year-old son of a minister, a high school junior. His family had moved frequently during his grade school and high school years. He was quite shy - usually sat off by himself and was considered a very low achiever, being far below his grade level. Naturally his self-image was poor. He had never had sufficient success to build a good one.

A specially designed 12-unit TV reading improvement course was introduced at the junior level. The teacher wondered about including Don, but finally decided to do so to see how this new approach would work with a serious problem case. The group met eight times, the first and last sessions being used for pre and post Nelson-Denny checks. For the intervening six sessions, two half-hour TV lessons were used to complete the series of twelve lessons.

By 11th grade norms Don was at the fourth percentile on the total score (vocabulary plus comprehension), and at the eight percentile on rate. Seven sessions later he had moved up to the eleventh percentile on his total score and to the ninety-fifth on rate. Up to that time he had never read a book before. While taking that course he read two novels-- over 700 pages. The class soon noticed that he had far better perceptual ability than most and was scoring quite high in work on the

tachistoscopic portions of the TV lessons. He rapidly gained status, began to open up, even asking questions in class, which he had never done before. His success led to a very gratifying change in self-image.

At the end all of the students were asked to evaluate the new closed-circuit approach. His statement reflected his positive feelings: "This is the only course I've ever had that benefits to the progress of all of the future courses I'll ever take involving reading, and I really think that if you can go from 128 words a minute with a 40 on a comprehension test to 1,396 words a minute with a 70 on a comprehension test, it's worth it."

Finally turn to college and the teaching of techniques of efficient reading. Even here, self-image problems exist, forcing students into crippling strait-jacketed patterns. Take the case of my student assistant. During her junior year at the University she complained that never, in big lecture-size classes, had she been able to get a grade higher than a C. She said she couldn't sustain interest. In smaller classes, A's and B's were typical. She functioned best in a small-group situation where her natural interest in people led to increased interest in subject matter.

She had just started the class in Psychology of Advertising, a class of about 300, and a Social Psychology class with 800 students. She felt C's were inevitable. Could she do anything to change?

This sounded like an intriguing problem, and a firsthand opportunity to try some image rebuilding. I suggested three things. First, as she

entered the class each day, she should say to herself without fail, "I wonder what interesting things I'll learn today in class?" Second, after each class period she was to tell some friend or acquaintance something interesting that she had learned during the hour. This too - without fail. And she was to preface the remark by the word "interesting." Finally, after each class session she was to listen and try to find a student who was discussing a point raised in class. She was then to try to get in on the discussion.

Well, she tried all three moves. Results? Her grade in the Pschology of Advertising was A, in Social Psychology a B - but she missed an A by only 7 points. She couldn't get over the fact that she had actually broken what she assumed was a set, unchangeable pattern - had in other words actually re-made her self-image.

As suggested by this example, even at the college level, self-image is at the very heart of most reading problems. Just listening to your students reveals that fact. "I'm a slow reader." "I can't concentrate." "I just can't comprehend well." An always or never lets you know how strong the self-image is.

To test the hypothesis that self-image is indeed a major factor in teaching techniques of efficient reading, specific research was contemplated. The problem? How do you objectify the subjective? How do you rate student self-image accurately when there is no measure available.

For further explorations, the area of reading rate was selected. Two questions were devised, the word potential used in one to get an approxi-

mation of individual self-image - what the student thinks, subjectively, he can do. Since the questions elicit objective figures, his subjective feeling is thus given objective form.

Two questions were asked on the first day of class, were repeated five weeks later in the middle of the quarter, and again on the last day.

The first question was this: "At present, what word-per-minute reading rate for magazine-type material do you feel marks the line between reading and skimming?"

The second question was this: "What word-per-minute reading rate do you feel is probably your personal upper reading rate limit for reading magazine type material, if you were to develop your full reading potential?"

Actually these two questions served two purposes, not one-- 1) they helped students see their progress in rate improvement more clearly and 2) they helped the teacher evaluate his own success in modifying student self-image.

At the beginning of the quarter, the students felt subjectively that 327 wpm marked the borderline between reading and skimming, on the average. If they were to develop full potential, they felt they would be able to read 565 wpm before starting to skim. Their actual rate, derived from reading an article immediately after answering these questions, was almost 100 wpm below the rate at which they felt they would be skimming - 256 wpm, with an average comprehension of 63 per cent.

By the middle of the quarter, at the 15th class meeting, answers to those identical two questions reflected a striking change in their reading self-image. Answers to the first questions now averaged 1,699 wpm and to the second, 1,241. Actual performance, checked immediately after answering the questions, showed them at the 992 wpm level, with a comprehension score of 54. At that point, students were not using their much higher rate with as much skill as they had their initial 256 wpm rate.

The end of the quarter check showed still further change in self-image. Answers to question 1 averaged 1,635 wpm and to question 2, 1,795 wpm. In short, even at this point the students felt they had not reached their full potential, reflecting a continuing growth of self-image and self-confidence. In actuality, their last reading at top speed averaged 1,968 wpm with 57 percent comprehension. This was the first time actual performance exceeded subjective estimates of rate. Comprehension, while not up to the initial level of 63 per cent, was better than the midquarter figure of 54 per cent.

Of course, magazine-type reading is not the same as that found in the usual standardized reading tests. On the Nelson-Denny Reading Test the students averaged 262 wpm initially, with a vocabulary and comprehension total of 77. At the end of the course, they averaged 685 wpm with a total score of 84. In short, this was careful reading, well below the rate of skimming, but they were handling that type of reading noticeably better, even at a rate 423 wpm faster than initially--2.6 times faster.

These data, however, while they reflect a single facet of self-image change during one quarter of study, do not answer the question which is probably uppermost. Do student with the highest self-image actually achieve better than students with a lower self-image?

Unpublished research by the speaker and Dr. Earl E. McDowell, University of Minnesota, focused on this question. When, initially, students are divided according to self-image into those above and those below the average, students with the higher self-image do actually read significantly faster than students with a below average self-image. Furthermore, as the course progressed, they continued to show a higher reading rate improvement than the other students.

It was with these considerations in mind that one week of our Efficient Reading classes is given over to what is called the Expediting intangibles" - interest, attitude, and self-image. In evaluating the importance of each week's emphasis, students ranked the intangibles third, right after vocabulary development and self-analysis.

As can be seen, attention to self-image provides the necessary keystone for teaching specific reading techniques. If well done, the techniques to be taught fall into place with minimum resistance and maximum acceptance, forming a related and meaningful whole. A low self-image apparently forms an invisible barrier or obstruction to progress. When image is improved, stronger motivation is generated, along with increased eagerness to learn.

Most students have far too narrow an approach to learning from the

printed page. In doing assigned reading for other classes 96% say they normally start with the first sentence and read the entire assignment. Just as a golfer selects the appropriate club for a given situation, so a reader should have a good selection of techniques for various situations, each one developed to a highly skilled level.

In teaching, new techniques are introduced in such a way that students may judge immediately the relationship between, say, surveying and reading, using two selections of similar difficulty and length. Students need to be reminded that the first time any new technique is tried, the results are not going to be very good. When a typist goes from the Biblical system--seek and ye shall find--better known as the two-finger hunt and peck sys tem, to the touch system, the new system is not immediately better. It takes practice.

On the day when skimming, as a technique is introduced and described in detail, students are then led to answer for themselves two crucial questions. What is the actual difference in rate between reading and skimming? And what is the actual difference in comprehension? On that day two comparable 2000-word selections are used, one read and one skimmed. As in one class, the reading trial averaged 735 wpm with 64.1 per cent comprehension. For the skimming trial which followed, the average was 1,277 wpm--542 words per minute faster than reading. But comprehension averaged only 48.7 per cent, 15.4 per cent less than with reading.

Each student's day-by-day record is entered on one sheet to heighten awareness of progress and to permit meaningful chronological comparisons.

For example, in that class, students could look back and see that exactly one week earlier when reading they were getting only 48 per cent comprehension. Now they are able to skim with the same comprehension - 48.7 - as they achieved by reading a week earlier. This individual class record sheet serves an important image-building function.

According to individual record sheets in that class of 34, four students, even the first time, were able to achieve exactly as much comprehension when skimming as when reading, a 50, 60, or 70 per cent level comprehension. Two students actually showed sufficient skill even the first time to comprehend better, one moving from 667 wpm with 40 per cent comprehension to a skimming rate only 83 wpm faster - 750 wpm with 70 per cent comprehension. The other student read at 600 wpm with 50 per cent comprehension and skimmed at 1263 wpm - over twice as fast - with 60 per cent comprehension, suggesting more than average skimming experience.

Explorations of this kind - a daily part of the course - are called ASD's - Active Self Discoveries, a heuristic approach. It is a truism that the best teaching demands the most active student involvement. In the reading sections emphasis is not on pouring in but in drawing out - not in viewing but in doing.

ASD spaced re-checks of each new technique help students see progress, and remind them to practice the techniques with other out-of-class reading to hasten their further development.

From surveying or pre-reading the students go to skimming and then to study-type reading. This lets them discover how each technique functions,

from surveying, which provides the best possible overview with the least time investment, to intensive, study-type reading which demands more work time but insures best possible comprehension.

Vocabulary development is introduced early in the quarter - the third week - and runs through the remainder of the course, contributing both to comprehension and rate, and the other two areas of concentration that are stressed throughout the entire quarter.

The vocabulary work is structured around results of some interesting data from a university class in zoology. Subsequent explorations and applications, made in the Efficient Reading sections, proved these data to be particularly helpful, when adapted to vocabulary. In the zoology class, a final examination was specially devised to investigate relative memory loss. The questions were grouped into five categories: 1) recall of facts, 2) recognition of technical terms, 3) names of organs identified from pictures, 4) application of principles, and 5) interpretation of new experiments.

Students were then given the same examination 15 months later to measure relative loss. The following results were observed:

80 per cent loss in recall of facts

72 per cent loss in recognition of technical terms

22 per cent loss in names of organs identified from pictures

No lost in application of principles

126 per cent gain in interpretation of new experiments.

The conclusion? Rote memory is the greatest waste in education.

In light of such evidence, the vocabulary work was centered on basic

principles to minimize loss. A programmed approach puts the strongest possible emphasis on context. When combined with the derivational approach both context and derivation are stressed. The importance of vocabulary in context is revealed by research by Holmes and Singer. It contributes 39 per cent to comprehension, more than any other first order factor, even more than intelligence which contributes only 37 per cent.

We have just recorded a series of twelve short vocabulary TV units in color, using a new character generator (Chiron II) to add dramatic interest. These twelve units, useful in class or in a learning center, focus on fluency (2 units) context (4 units) and derivation (6 units.) These units are built around important principles, including a basic word analysis formula--LDE--as a principle to fuse units together. Time--approximately 5 minutes to 11 minutes per unit, a total of 1½ hours for all twelve.

Student attention is focused on the four meanings or principles of knowing by an introductory test. It provides the desired framework for their vocabulary-building efforts, reminding them that knowing means 1) memorization, 2) identification, and 3) application, the pay-off step. The fourth area is generalization - leading from the specific elements studied to any and all others found in the English language, a most important final move. As the course progresses, students are given a series of short 20-item quizzes, each of increased difficulty and moving closer to normal words in context.

The final quiz is a short paragraph of about 120 words from an Atlantic Monthly article which contains about 25 words with prefix

or root elements which they should be able to discover and deal with. To demonstrate the inter-relatedness of Latin, French, Spanish and English, students are also given as a final test thirty French words to define. If they know prefix and root elements, they can score very well, for the items are constructed so that knowledge of prefix or root meaning will lead them to the right answer. This gives them a real sense of accomplishment and contributes greatly to an improved self-image. They discover for themselves how effectively principles work and how broadly they can be applied.

Perceptual development also plays a critical role in development of self-image. As in the case of Don, often some of the poorer students find their confidence built up rather quickly by use of the tachistoscope. Initially, the projecting speed is 1/10 of a second. Four-digit, five-digit, and six-digit numbers are flashed, then short phrases or sentences to provide an initial perceptual skill score. From then on for about two ten-minute sessions a week, fourteen slides of twenty words or phrases are flashed, the speed gradually moving up to 1/25, 1/50 and finally 1/100 of a second.

Progress is sufficiently rapid so that students have a strong growing feeling of confidence. At 1/100 of a second, a six-word phrase, if seen correctly, means a rate of 36,000 wpm, a dramatic reminder of the ability of the eye to take in a number of words at a high speed. They know they cannot do that continuously but they also know first-hand what their eyes are capable of, an important image builder.

The role of visual imagery traces back to the zoology data, where a picture aided remembering. More recent research by Jean Houston in the laboratory at the Foundation for Mind Research plays up the naturalness of the visual versus the learned and relatively unnaturalness of the verbal. Reading, primarily a verbal act, should not, according to Dr. Houston, inhibit the natural capacity to think in visual images. Both visual and verbal images deserve attention in our teaching of reading. We should never sacrifice the visual to the verbal.

As can be seen, the visual dimension is central, the phrase Visual Expeditors suggesting its role. It appears in the tachistoscope, TV units, slides (over 600), transparencies, reading films, and individual progress record sheets and graphs. If learning is to be a productive exciting experience, apparently VE's must play a dominant role.

We have been gradually closing in on our most familiar, most talked about concerns, but, through indirection, are hopefully approaching them from a fresh angle. These concerns are the techniques for 1) improving comprehension, 2) increasing speed and 3) facilitating further vocabulary development--all primary concerns. Each of those can, of course be subdivided. For example, under comprehension what specific techniques will help students get details more accurately, main ideas more clearly, and organization more easily. Under reading speed, what specific techniques help students develop maximum speed as well as maximum skill in surveying, skimming, scanning and intensive reading. And under vocabulary, what specific techniques help students develop increased fluency, make improved use of con-

textual clues, and facilitate use of prefix, root and suffix elements in word-analysis efforts.

In this paper, rather than dealing with specific techniques, stress has been on establishing a strong underlying frame of reference. Given that foundation, specific techniques tend to fall naturally into place to form a well-unified total reading structure. Given the needed basic principles students are encouraged to discover or devise techniques for themselves as well as to apply those techniques taught in class.

The principles are few but crucial. To summarize, of prime importance is the basic principle of self-discovery, insuring active student involvement. Active Self Discoveries (ASD's) play a vital role in developing added reading efficiency. Secondly, Visual Expeditors (VE's) provide invaluable help for the visualizing of problems, the developing of more perceptual skill and for stimulating the translation of problems into visual form. Thirdly, as a solid foundation for all efforts, comes the principle of self-image, to build needed confidence and to encourage new approaches and techniques. Individual progress record sheets with their visualizing of success are an indispensible aid here.

Finally, as teachers of reading, we can be encouraged in all our efforts by remembering what Carlyle once said: "If we but think of it, all that a University or final highest school can do for us is still what the first school began doing--teach us to read."